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A STUDY OF THE COMPREHENSIVE STATE HOPE SCALE IN ITALIAN CULTURE

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Hope is a vital human resource. From antiquity to the present, scientists and poets alike have viewed hope as a necessity for navigating the vicissitudes of life. In modern psychological science, there is increasing empirical evidence that positive emotions such as hope can have a direct impact on physical and psychological well-being, from increasing stress tolerance and performance in work and academic settings to altering health habits and even immune functioning. In the present study, we translated a comprehensive, multidimensional measure of hope into Italian, and we assessed the psychometric parameters of this version. Our sample included 1,280 Italian adults (males = 553, females = 727), ages 18 to 77. In addition to the Comprehensive State Hope Scale (CHS–S; Scioli, Ricci, Nyugen, & Scioli, 2011), participants received two goal-oriented measures of hope, a measure of optimism, and a generalized self-efficacy scale. The Italian translated CHS–S demonstrated strong reliability and significant, positive correlations with (goal-focused) hope, optimism, and self-efficacy as well as a significant, negative correlation with pessimism. Exploratory and confirmatory factor analyses partially replicated the original U.S.-derived factor structure but also suggested some potentially important cultural differences in the social construction of hope in Italy versus the United States.

Key words: Hope; Measurement; Model testing; Self-efficacy; Intercultural testing.

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Positive psychology is taking hold as the newest mini-paradigm within the field (Hill & Hall, 2018; Seligman & Csikszentmihalyi, 2000). Forays into positive psychology typically fall into one of two categories; understanding and applying character strengths (virtues), or articulating and promoting well-being (e.g., happiness, flow, etc.). In practice, these two spheres often intersect. For instance, some psychologists favor a definition of the "good life" in the Aristotelian sense of eudemonia (virtue leading to meaning, purpose, or fulfilled potential) as opposed to hedonic well-being (joy or positive affect). Another example lies in the domain of work and career counselling where a focus on both strengths and well-being often converge in holistic attempts to encompass the needs of the individual and the organization. The career counselling life design framework of Savickas et al. (2009) is a good example of integrating strengths as well as both hedonic (favorite story) and eudemonic elements (meaning-making). Health psychology is a

third domain where strengths and outcomes converge, as in the study of self-regulation as both a means and a desired end state (Wirtz, Stalls, Scollon, & Wuensch, 2016).

Emotions lie at the centre of many studies in positive psychology. Freed from earlier, reductionist biological or behavioral models, a richer, more balanced psychology of emotions has emerged, dovetailing in important ways with positive psychology (Algoe, Frederickson, & Chow, 2011; Averill, 2009). In particular, emotions such as hope, optimism, and gratitude, are increasingly at the center of research on strengths and outcomes, relating to both resilience and flourishing (Folkman, 2010; Park, Peterson, & Seligman, 2004).

The Importance of Hope

Hope occupies a special place in human life. Martin Luther (in Kepler, 1566/2005, p. 106) declared "Everything that is done in the world is done by hope." Within and beyond positive psychology, hope appears as a critical coping process (hoping) and a vital character strength (hopefulness). Additionally, hope is a desired outcome, particularly in the context of depression, illness, or other forms of dysregulation. The benefits of hope are wide ranging; from facilitating emotional regulation, to aiding cognitive and work performance. In health psychology, hope emerges as a moderator of stress on emotional and physical health outcomes (Gottschalk 1985), including psychosocial adaptation in cancer patients (Del Vecchio Good, Good, Schaffer, & Lind, 1990; Snyder et al., 1991). Several studies suggest hope may directly affect the immune system or even delay mortality (Scioli, MacNeil, Partridge, Tinker, & Hawkins, 2012). Hope is also crucial in psychological and spiritual development (May, 1991).

Conversely, a lack of hope may precipitate withdrawal and depression (Beck, Rush, Shaw, & Emery, 1979; Hanna, 1991). For half a century, investigators have pointed to hopelessness as one of the leading predictors of suicide (Franklin et al., 2017). Psychologists focusing on the goal-related aspects of hope highlight its values in vocational domains such as positive work identity and career building (Amundson, 2013; Yakushko & Sokolova, 2010), as well as educational achievement (Kenny, Blustein, Haase, Jackson, & Perry, 2006; Snyder et al., 1991).

Approaches to Hope

Within psychology, there are several approaches to hope. Erikson (1950) provided the first notable psychology of hope. His insights were limited to the earliest years of development and the role of attachment. Beyond a few thinkers in philosophy and theology, Erikson's insights remained untapped. A decade later, a cognitive-behavioral, goal-focused tradition began with Mowrer (1960), continued with Stotland (1969), then Beck, Weissman, Lester, and Trexler (1974), and ultimately Snyder et al. (1991). According to Snyder et al., hope is a two-component cognitive set that includes positive expectations arising from agency and pathways beliefs (wills and ways). To distinguish this expectancy-laden view of hope from presumably similar constructs such as optimism and self-efficacy, Snyder et al. propose that optimism derives from outcome expectancies, self-efficacy from agency expectancies, and hope from both sets of expectations. We will return to this proposed tripartite division in a later section. Before doing so, we consider an alternative understanding of hope.

Another line of psychological studies of hope is focused on a more complex view of emotionality and adds various aspects of culture. For example, Averill, Catlin, and Chon (1990) view hope as an emotion (not a cognitive set) which involves tempered reality negotiations as opposed to the firm expectations of optimism. Cultural values influence hope, but not optimism. Scioli and his colleagues (Scioli, 2007; Scioli & Biller, 2009; Scioli, Ricci, Nyugen, & Scioli, 2011) present an integrative model of hope, drawing on the attachment, survival, and mastery motives. Following Averill's (1997) social constructivist approach to theory building, Scioli et al. (2011) view hope as a multilevel system primarily organized by social principles of organization. Scioli and Biller (2009, p. 30) define "hope as a future-directed, four-channel emotion network, constructed from biological, psychological, and social resources." To capture the wide spectrum of components that define trait hope (hopefulness), it is necessary to posit five levels (biological systems, early environment, traits, centers of value, and expressions). The subelements of hopefulness are trust, openness, and connectedness (attachment), self-regulation and liberation strategies (survival), perceived strengths and cherished ideals (mastery), and transcendent relationships to bolster one or more of the underlying motive systems (spirituality). Hope is both a state and trait. As a state, hope is an organizing and motivating collection of thoughts, feelings, and actions (Scioli & Biller, 2009).

Du and King (2013) favor this more holistic and integrative approach as compared to Snyder's (2002) agency-focused, cognitive theory. From a cross-cultural perspective, the model of Scioli et al. goes beyond individualistic definition of hope in terms of goals, to encompass the relational aspects, which are particularly salient in collectivist cultures. In one application to health psychology, Scioli and colleagues found that the hope components of attachment, survival, and spirituality, typically neglected in U.S. psychology, were especially relevant in the context of serious illness (advanced breast cancer) as well as movement through stages of change for diet exercise and other health habits (Scioli, Scioli-Salter, Sykes, Anderson, & Fedele, 2016).

Hope, Optimism, and Self-Efficacy

Some psychologists place hope in a larger, undifferentiated category of positive virtues, indistinguishable from constructs such as optimism or self-efficacy (e.g., Peterson & Seligman, 2004). Others, such as Snyder et al. (1991) and Averill et al. (1990) argue for the uniqueness of hope. Clearly, it matters how one defines, not only hope, but also optimism and self-efficacy. According to Scheier and Carver (1985) optimism is the expectation that positive results will occur regardless of one's personal actions. In contrast, perceptions of self-efficacy derive from beliefs that one has the *personal capabilities* to produce certain outcomes. In Bandura's (1986) view, we should understand self-efficacy in domain-specific terms (e.g., personal effectiveness in educational, vocational, or athletic performances). Others, such as Schwarzer and Jerusalem (1995) favor a generalized notion of self-efficacy that confers a sense of personal mastery over a wide swath of life domains. Both domain-specific and generalized self-efficacy remain popular constructs within social cognitive theory (Di Corrado, Vitali, Robazza, & Bortoli, 2015).

Magaletta and Oliver (1999) suggested that hope, as defined by Snyder et al., and optimism, are distinct but overlapping constructs. At the conceptual level, they noted similarities (in item content) between agency and self-efficacy as well as pathways and optimism. Empirically, a factor analysis suggested some overlap between self-efficacy and agency but optimism and pathways items loaded separately. Bryant and Cvengros (2004) compared scores on the Snyder et al. (1991) Adult Hope Scale with standard measures of optimism and self-efficacy. Hope, optimism, and self-efficacy were intercorrelated, with the

strongest association between hope and optimism (r = .80). The authors hypothesized that hope may relate to perceptions of attaining specific goals whereas optimism might consist of a more general positive outlook. In each of these investigations, the authors rely on a goal-focused approach to hope. Recall that Snyder et al. proposed that hope is different because it includes efficacy expectancies and outcomes expectancies whereas optimism and self-efficacy includes just one or the other expectation. We find this distinction lacking, leading to the conclusion that hope is nothing more than the sum of optimism plus self-efficacy.

Focus of the Present Study

The importance of hope, from buttressing psychological functioning to supporting social adjustment and even moderating physical health outcomes, underscores the need to have a reliable and valid instrument for intercultural research. The grounding of the Comprehensive State Hope Scale (CHS–S; Scioli et al., 2011) in a multimotive, integrative model provides an ideal platform for cross-cultural adaptation. The aim of the present study is the adaptation of this measure, already validated in English, for use in Italian culture. We sought to verify its multifactorial structure, as well as the reliability and validity of this measure. Moreover, we endeavored to compare this broader construction of hope with several goal-oriented conceptualizations, as well as measures of optimism, pessimism, and self-efficacy.

Method

Participants and Procedure

The participants were 1,280 Italian adults (males = 553, 43.2%; females = 727, 56.8%), aged 18 to 77 years (M = 31.28; SD = 13.37). Approximately 20% had a junior high school degree (287, 22.4%), about half the participants were high school graduates (571, 44.6%); and slightly more than 30% had a university degree (421, 32.9%; one missing value). We relied on a method of convenience sampling (social networks). We obtained the data anonymously via an online survey. The participants could terminate the process at any time. The respondents came from multiple regions of Italy, spanning north and south. We obtained approval for this study from a University Ethical Commission and followed the ethical guidelines of the Italian Psychological Association and the Italian Society for Vocational Guidance (SIO).

Measures

The *Comprehensive State Hope Scale* (CHS–S; Scioli et al., 2011) is composed of 40 items. Respondents receive the following instructions: “My recent thoughts and feelings. This questionnaire deals with your current and recent thoughts and feelings. That is, how you feel today and over the past two weeks.” A 5-point Likert scale indicates levels of hope, ranging from *none* (0) to *extremely strong* (4). The 40 items reflect 10 subscales that coalesce into four larger clusters. The *mastery* cluster includes ultimate gains (UG; sample item: “I feel hopeful about achieving a major life goal”) and supported strivings (SS; sample item: “I am able to rely on outside help to achieve my goals”). The *attachment* cluster includes interpersonal bonding (IB; sample item: “I feel very close to a friend or family member”) and trust experiences (TE;

sample item: "I'm finding it hard to trust people," reversed score). The *survival* cluster includes fear reduction (FR; sample item: "My emotions are under control") and liberation experiences (LE; sample item: "I feel 'trapped' in some part of my life," reverse scored), as well as interpersonal assurance (IA; sample item: "A good way for me to reduce stress is to spend time with my friends and/or family"). The *spiritual* cluster includes spiritual inspiration (SI; sample item: "I have used prayer or meditation to help me accomplish an important goal"), spiritual presence (SP; sample item: "I have felt connected to a spiritual force"), and spiritual assurance (SA; sample item: "I have used prayer or meditation to help me reduce my worries").

The CHS–S is also divisible into three larger subscales, *nonspiritual hope* (sum of attachment, survival, and mastery), *spiritual hope*, and *total hope*. Cronbach's alpha values range from .83 to .98 for the 10 subscales, .96 for the total scale (Scioli et al., 2011). Two bilingual psychologists translated the English version of the scale using a standard back-translation process.[1]

The Adult Hope Scale (AHS; Snyder et al., 1991; Snyder, 1995) is composed of 12 items, four of which are filler items. Eight items assess two subcomponents of hope: agency (sample item: "I've been pretty successful in life") and pathways (sample item: "I can think of many ways to get the things in life that are most important to me"). Participants rate the extent to which each item is true for them using a 4-point Likert scale ranging from *definitely false* (1) to *definitely true* (4). Cronbach's alpha values are .70 and .77 for the two subscales, respectively, and .82 for the total score (Snyder et al., 1991). Ferrari, Nota, and Soresi (2010) verified the psychometric properties and the factorial structure of the scale in an Italian context, finding good results. In this sample, Cronbach's alpha values were .71 and .74 for the two subscales, and .82 for the total score.

Visions about future (VAF; Ginevra et al., 2016) is a 22-item scale, with three filler items. The response format is a 5-point Likert scale from "*It does not describe me at all*" (1) to "*It describes me very well*" (5). The items are grouped into three dimensions: hope (sample item: "In the future I will engage in very important projects"); optimism (sample item: "I think of myself as a person who thinks positively"); and pessimism (sample item: "I will not be able to realize what I really care about"). In this sample, Cronbach's alpha values were .89 for hope, .88 for optimism, and .80 for pessimism.

General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995; Italian adaptation: Di Nuovo & Magnano, 2013) is a one-dimensional, 10-item scale, with a 5-point Likert format, from *completely agree* (5) to *completely disagree* (1). Across 23 nations, Cronbach's alphas range from .76 to .90, with the majority in the high .80s. In the present sample, Cronbach's alpha was .91.

Results

Descriptive Analyses of the Comprehensive State Hope Scale (CHS–S)

Table 1 contains the 40 items of the CHS–S and associated descriptive statistics. Several of the items display higher than desirable skew or kurtosis (e.g., > ± 1.0). However, in large samples (> 200), these deviations exert minimal impact on variance estimates (Tabachnick & Fidell, 2007). The standard error (SE) for both skewness and kurtosis are similar to those reported by Scioli et al. (2011) — SE skewness: Italian sample = .068, U.S. sample = .075; SE kurtosis: Italian sample = .137, U.S. sample = .151). The range of item means is also comparable (Italian sample = 1.16 to 3.24; U.S. sample = 1.50 to 3.17). We drew an existing U.S. sample of comparable age (Italian sample: M = 31.28 years; U.S. sample: M = 31.21 years) for comparison by gender (Italian sample: males = 553, females = 727; U.S. sample: males = 794, females = 1,965).

TABLE 1
Descriptive statistics (N = 1,280)

	M	*SD*	Skewness	Kurtosis
Item 1	3.24	0.90	–1.12	.92
Item 2	3.03	1.02	–.84	.06
Item 3	2.14	0.90	–.13	–.23
Item 4	1.50	1.29	.37	–1.01
Item 5	2.69	1.11	–.61	–.27
Item 6	1.97	1.14	–.01	–.73
Item 7*	1.89	1.30	.10	–1.08
Item 8	1.46	1.21	.40	–.76
Item 9	2.05	1.00	–.06	–.32
Item 10	3.23	0.94	–1.19	.99
Item 11*	1.94	1.34	.05	–1.17
Item 12	1.43	1.22	.45	–.77
Item 13*	2.00	1.15	.02	–.74
Item 14	2.94	0.99	–.77	.17
Item 15	2.47	1.06	–.35	–.39
Item 16	1.33	1.27	.58	–.78
Item 17	2.10	1.12	–.06	–.59
Item 18	1.42	1.34	.51	–.96
Item 19*	1.77	1.59	.23	–1.52
Item 20	1.38	1.33	.58	–.85
Item 21	2.38	1.00	–.28	–.19
Item 22	2.42	1.14	–.46	–.51
Item 23	2.19	0.92	–.04	–.15
Item 24	1.29	1.25	.58	–.75
Item 25	2.08	1.12	–.19	–.57
Item 26	2.36	1.07	–.30	–.40
Item 27*	1.93	1.23	.07	–.96
Item 28	1.55	1.31	.38	–.95
Item 29	2.36	1.05	–.32	–.34
Item 30	2.95	1.05	–.86	.18
Item 31*	1.82	1.41	.13	–1.30
Item 32	1.40	1.31	.50	–.92
Item 33*	1.95	1.26	.01	–1.02
Item 34	2.46	1.02	–.31	–.30
Item 35	2.78	1.03	–.70	.13
Item 36	1.29	1.27	.64	–.69
Item 37*	2.04	1.11	–.06	–.62
Item 38	1.16	1.19	.76	–.39
Item 39*	1.79	1.54	.22	–1.47
Item 40	1.41	1.29	.48	–.88

Note. *Item with reversed scoring.

We compared means for nonspiritual hope and spiritual hope across cultures. In both the United States and Italy, females reported higher scores on both subscales ($p < .001$). For this reason, we ran comparisons within each gender. U.S. males and females reported higher levels of both nonspiritual hope and spiritual hope. The differences in nonspiritual hope were modest in effect size (ES) — U.S. males: M = 67.53, SD = 21.54; Italian males: M = 63.32, SD = 13.29; $t(1,345) = 4.09$, $p < .001$, ES = .24; U.S. females: M = 71.43, SD = 21.18; Italian females: M = 66.20, SD = 13.32; $t(2,690) = 6.22$, $p < .001$, ES = .30). Greater differences appeared in the realm of spiritual hope — U.S. males: M = 23.98, SD = 13.74; Italian males: M = 15.16, SD = 12.63; $t(1,345) = 11.98$, $p < .001$, ES = .67; U.S. females: M = 27.44, SD = 14.12; Italian females: M = 17.74, SD = 12.95; $t(2,690) = 16.18$, $p < .001$, ES = .72).

Initial Factor Structure (40 Items)

With the aim of confirming or disconfirming the original factorial structure of the scale, we decided to firstly perform a confirmatory factor analysis (CFA) with 10 latent factors and forty observed variables (items) with LISREL 8.80 (Jöreskog & Sörbom, 2006). For comparison purposes, we used the same method of factor extraction as Scioli et al. 2001 — i.e., maximum likelihood (ML); Byrne 2001. Several fit indices were applied (Schermelleh-Engel, Moosbrugger, & Müller, 2003). For example, while a nonsignificant χ^2 ($p > .05$; Bentler, 1990) suggests an overall "adequate fit" (factorial model and data are not divergent), more refined estimations of fit are obtained by introducing several other indices. Such computations can point to conflicting conclusions about the level of model-data correspondence, particularly in the context of varying sample sizes. For this reason, a multiple index strategy is preferred (Hu & Bentler, 1999; Jöreskog, 1993). Common indices include the comparative fit index (CFI; good fit = between .95 and 1; Bentler, 1990), the standardized root mean square residual (SRMS; acceptable = < .08; Brown & Cudeck, 1993), and the root mean square error approximation (RMSEA; good fit < .05; Hu & Bentler, 1999). When comparing derived models, the Akaike information criterion (AIC) is a standard index, with lower AIC values indicating a superior fit (Burnham & Anderson, 2002).

We further assessed modification indices to gauge how well the hypothesised model was described (Byrne, 2001). Modification indices "reflect an approximation of how much the overall model chi-square would decrease if the fixed or constrained parameter was freely estimated" (Brown, 2006, p. 119). Correlated errors are specified when some of the shared variance between two observed items is not explained by latent factors.

Classical item analysis followed on the revised (Italian) scale, including computations of Cronbach's alpha. We examined the concurrent validity of the resulting CHS–S through comparisons with standard measures of self-efficacy, future-outlook, and so forth, previously described (see Pearson's r coefficients and post-Bonferroni adjusted). We used an independent samples t-test to evaluate gender differences.

Revised Factor Structure

The results of CFA (ML estimation) indicated that the original four-factor model could not be confirmed (fit indices below thresholds). This suggested a possible cultural mismatch (see Model 1 in Table 3). Subsequently, we conducted an exploratory factor analysis (EFA) using principal component analysis (oblique rotation, Promax method), obtaining a four-factor, 40-item structure, accounting for 51.64% of the variance. Table 2 contains the factor loadings (> .30). The first factor, *spirituality*, is composed of 12

items, and accounted for 23.83% of the variance. The item set is identical to the original spiritual factor of Scioli et al. (2011). The second factor is similarly composed of 12 items, accounting for 13.83% of the variance, and includes the interpersonal assurance, interpersonal bonding, and supported strivings subscales of the original instrument. We labelled this factor *support/empowerment*. The third factor comprises nine items, accounted for 9.03% of the variance, and includes the liberation experience and trust experience subscales. We labelled this factor *liberation/trust*. The fourth factor is composed of seven items, four from ultimate gains (goal progress) and three from fear reduction (self-regulation), and accounts for 4.94% of the variance. We labelled this factor *personal mastery* (see Table 2).

We explored the fit of this revised model by CFA (using the ML estimation method). The indices in Table 3 reveal a Model (#2) that is improved, but still inadequate (e.g., CFI is below threshold). An analysis of the modification indices and internal consistency values, led to the exclusion of Items 1, 2, and 37 (EFA loadings < .40). We tested a third model, with 37 items and four factors. The results (reported in Table 3) reveal better fit parameters for Model 3 than Model 1or 2; the lower AIC index confirms that Model 3 is the best factor solution (Burnham & Anderson, 2002). All the factor loadings (lambda x) are significant (ranging from .19 to .88).

TABLE 2
Exploratory factor analysis (loadings > 0.30 reported)

	Factor			
Item	1	2	3	4
Item 40	.90			
Item 24	.87			
Item 32	.87			
Item 36	.87			
Item 38	.86			
Item 28	.86			
Item 18	.85			
Item 20	.84			
Item 16	.84			
Item 12	.79			
Item 8	.78			
Item 4	.78			
Item 34	.79			
Item 5		.78		
Item 25		.73		
Item 14		.72		
Item 10		.66		
Item 35		.65		
Item 26		.65		
Item 15		.48	.36	
Item 6		.47		
Item 30		.45		
Item 22		.40		
Item 2		.35		
Item 19			.80	
Item 31			.76	

(Table 2 continues)

Table 2 (continued)

	Factor			
Item	1	2	3	4
Item 39			.74	
Item 27			.71	
Item 33			.70	
Item 11			.61	
Item 13			.53	
Item 7			.40	
Item 37			.34	
Item 9				.76
Item 21				.75
Item 23				.71
Item 29				.69
Item 17				.65
Item 3				.55
Item 1				.34

TABLE 3
Confirmatory factor analyses: The CHS–S

Model	Items	Factors	$\chi^2(df)$	SRMR	RMSEA	CFI	AIC	*CMIN*/*df*
Model 1	40	4	8614.29 (734)	.10	.11	.89	12111.34	11.74
Model 2	40	4	4737.22 (734)	.05	.07	.94	5728.48	6.45
Model 3	37	4	4026.44 (623)	.05	.07	.95	4895.68	6.46

Note. SRMR = standardized root mean square residual; RMSEA = root mean square error approximation; CFI = comparative fit index; AIC = Akaike information criterion; *CMIN*/*df* = the minimal value of the discrepancy, *C*, divided by the degrees of freedom. All χ^2values p < .001.

Reliability, Item Analysis, and Gender Differences

The internal consistency of the final translated Italian CHS–S (37 items) is strong: spirituality = .95, support/empowerment = .86, liberation/trust = .82, personal mastery = .80, total state hope = .89. The total score of the 37-item Italian version ranged from 17 to 141, with M = 73.28, SD = 20.10, skewness = .37, kurtosis = .12, and the Shapiro-Wilk statistic for normality = .99 (Shapiro & Wilk, 1965), confirming an adequate distribution of scores. Sample quartiles scores were 59 (Q1), 72 (Median), and 86 (Q3).

Table 4 contains the item analysis of the 37-item version CHS–S. The item means, standard deviations, and item-total values, along with the overall alpha value (.89), suggest a stable and psychometrically sound instrument. We found statistically significant but small effect gender differences, a possible by-product of a large sample, Cohen's (1992) d = .20 — *spirituality*, males: M = 15.17, SD = 12.63; females: M = 17.74, SD = 12.98; $t(1,278)$ = 3.57, p < .001, d = .20; *support/empowerment*, males: M = 27.46, SD = 7.23; females: M = 29.04, SD = 7.71; $t(1,278)$ = 3.74, p < .001, d = .21; *liberation/trust*, males: M = 14.54, SD = 7.51; females: M = 15.49, SD = 6.99; $t(1,278)$ = 2.32, p < .05, d = .13; *personal mastery*, males: M = 13.37, SD = 4.17; females: M = 13.01, SD = 4.56; $t(1,278)$ = 1.48, p > .05, d = .08; *total hope*, males: M = 70.51, SD = 19.44; females: M = 75.40, SD = 20.35; $t(1,278)$ = 4.37, p < .001, d = .25.

TABLE 4
Item analysis: 37-item CHS–S (N = 1,280)

Item	*M*	*SD*	Item-total (excluding item)	α (excluding item)
Item 3	2.14	0.98	.27	.89
Item 4	1.50	1.29	.62	.89
Item 5	2.69	1.11	.36	.89
Item 6	1.97	1.14	.32	.89
Item 7	1.89	1.30	.12	.90
Item 8	1.46	1.21	.61	.89
Item 9	2.05	1.00	.41	.89
Item 10	3.23	0.94	.25	.89
Item 11	1.94	1.34	.20	.90
Item 12	1.43	1.22	.60	.89
Item 13	2.00	1.15	.16	.90
Item 14	2.94	0.99	.25	.89
Item 15	2.47	1.06	.38	.89
Item 16	1.33	1.27	.67	.87
Item 17	2.10	1.12	.40	.89
Item 18	1.42	1.34	.65	.87
Item 19	1.77	1.59	.26	.89
Item 20	1.38	1.33	.62	.89
Item 21	2.38	1.00	.38	.89
Item 22	2.42	1.14	.27	.89
Item 23	2.19	0.92	.26	.89
Item 24	1.29	1.25	.68	.89
Item 25	2.08	1.12	.36	.89
Item 26	2.36	1.07	.40	.89
Item 27	1.93	1.23	.21	.89
Item 28	1.55	1.31	.63	.89
Item 29	2.36	1.05	.41	.89
Item 30	2.95	1.05	.30	.89
Item 31	1.82	1.41	.26	.89
Item 32	1.40	1.31	.62	.89
Item 33	1.95	1.26	.21	.89
Item 34	2.46	1.02	.37	.89
Item 35	2.78	1.03	.34	.89
Item 36	1.29	1.27	.67	.89
Item 38	1.16	1.19	.65	.89
Item 39	1.79	1.54	.27	.89
Item 40	1.41	1.29	.65	.89

Concurrent Validity: Convergent and Divergent Findings

We explored the convergent and divergent validity of the 37–item Italian CHS–S through comparisons with measures of ostensibly related constructs (i.e., AHS, VAF Scale, and GSE Scale). The CSH–S total score correlations are in the expected direction and generally affirm the validity of the Italian version of this instrument (See Table 5). The CSH–S total score is significantly and positively related to the Snyder

et al. (1991) AHS (subscales: agency, pathways, and total) as well as the hope and optimism subscales of the VAF, and the measure of GSE. As expected, there is an inverse relationship between total CSH–S scores and (lower) VAF pessimism subscale. Nevertheless, the moderate correlations between the CSH–S and both the AHS and the VAF Scale suggest these three measures do not tap identical constructs (CSH–S and AHS, $r^2 = .12$; CSH–S and VAF, $r^2 = .14$).

Further evidence of convergent and divergent validity appears at the level of CSH–S subscales. The greatest convergence is between the *personal mastery* and *support/empowerment* factors, and the measures of hope, optimism, and self-efficacy (personal mastery: average $r = .56$, $r^2 = .31$; Support/empowerment: average $r = .38$, $r^2 = .14$). *Spirituality* and *liberation/trust* show the greatest divergence with the criterion scales. The CSH–S spirituality subscale shows significant but small correlations with the other measures of positive affect (average $r = .15$, $r^2 = .02$). The liberation/trust subscale is virtually uncorrelated with the selected criterion measures (average $r = .04$, $r^2 = .002$).

TABLE 5
Correlations between the Italian CHS–S, AHS, VAF, and GSE (N = 1,280).

	AHS			VAF			GSE
CHS–S	Agengy	Pathways	Total	Hope	Optimism	Pessimism	Self-efficacy
Sprituality	.14**	.08*	.13**	.13**	.25**	–.06*	.10**
Support/empowerment	.38**	.33**	.39**	.43**	.42**	–.29**	.30**
Liberation/trust	–.05	–.06*	–.06*	.02	.01	.02	–.07
Personal mastery	.59**	.45**	.58**	.56**	.58**	–.31**	.53**
Total hope	.35**	.26**	.34**	.37**	.45**	–.22**	.28**

Note. Pearson r coefficients and p values reflect post-Bonferroni adjustments.
*$p < .01$. **$p < .001$.

DISCUSSION

The aim of the present study was to verify the psychometric properties of the CHS–S in Italian culture. The results provide evidence for the reliability and validity of the Italian version of the CHS–S, with minor modifications of the original version. The absence of gender differences permitted analyses of the whole sample.

Results of an initial CFA of the original four-factor solution revealed an inadequate fit. We then conducted an EFA of the complete 40-item set. The items clustered into four factors that varied from the original U.S. solution. These factors are spirituality, support/empowerment, liberation/trust, and personal mastery. Nevertheless, the fit parameters for this solution were still below threshold. We eliminated three items with low factor loadings. The resulting 37-item and the four-solution model demonstrated strong fit parameters. These differences are not surprising, as many authors have highlighted the need to examine the cross-cultural validity and usefulness of emotion measures in other countries and cultures (e.g., Chan, Zhang, Fung, & Hagger, 2015; Titova, Wagstaff, & Parks, 2017). The 37-item CHS–S, and its subscales, show excellent internal consistency reliability, well above the suggested threshold of 0.80 (Nunnally & Bernstein, 1994). We verified convergent validity. The CHS–S total scale correlated in a positive direction with the Snyder AHS as well as the hope and optimism subscales of the VAF, and the GSE Scale. Higher CHS–S scores were associated with lower VAF pessimism scores.

Previous studies have suggested that self-efficacy, optimism, and hope are related but not identical constructs (Magaletta & Oliver, 1999). A number of studies have indicated an overlap between hope and self-efficacy (Carifio & Rhodes, 2002; Feldman & Kubota, 2015; Magaletta & Oliver, 1999). Peterson and Seligman (2004) cast hope and optimism as one trait. Bruininks and Malle (2005) argued that hope and optimism share the common feature of a "positive anticipatory state." We interject with a caveat. These and other studies that combine or dissolve multiple emotions into one entity beg the questions of meaning and operationalization. What does an author or investigator mean by "hope," "optimism," or "efficacy"? For scholars dedicated to the study of emotion, such differences matter. For example, Averill et al. (1990) suggested that there are multiple differences between hope and optimism, including levels of expectation, justification beliefs, and status as an emotion. For scholars of hope, there is an even greater effort to preserve the uniqueness of this construct. Lynch (1965) and Pruyser (1986) emphasized the role of social support in hope, which is not central to either optimism or self-efficacy. Pruyser (1986) specifically noted that optimism (but not hope) is "ego-centered." In his classic work on fundamental and ultimate hope, Marcel (1962) linked hope to trust, an element not typically associated with either optimism or self-efficacy. There is also a considerable nursing literature on hope that highlights its unique buffering effects (e.g., Cleary, Sayers, & Lopez, 2016; Cutcliffe & Herth, 2002).

Scioli et al. (2011) point to discipline-based tendencies to equate hope with mastery or goals (psychology), survival or coping (nursing), or attachment (philosophy and theology). The desire to move beyond these disciplinary boundaries led to the development of a comprehensive approach to hope theorizing, assessment, and therapy.

Empirically, the average shared variance between the CHS–S and the other two measures of hope was 12%. In contrast, the overlap between the Snyder AHS and VAF-hope is 41%. We can also compare each measure of hope against self-efficacy and optimism. The average shared variance for the alternative measures of hope (AHS and VAF) with VAF-optimism is 40%. For self-efficacy, the average overlap is 43%. In contrast, the overlap for the CHS–S was 20% for optimism and 8% for self-efficacy.

The pattern of correlations involving the CHS–S subscales provides further evidence of divergent validity. Given the more goal-oriented nature of both the AHS and VAF-hope, we expected, and found, the greatest convergence between these two measures [of hope] and the *personal mastery* subscale of the CHS–S (r^2 = .32), followed by the CHS–S *support/empowerment* subscale (r^2 = .17). In contrast, there was little shared variance between the other two measures of hope, and CHS–S *spirituality* (2%) or *liberation/trust* (less than 1%). In the psychological literature, readers will find that spirituality appears as both a separable construct, empirically divisible from other states and traits (Piedmont, 1999), and a theoretical derivative of more "fundamental" motive systems such as attachment (Kirkpatrick, 2012) or survival (Soenke, Landau, & Greenberg, 2013). Putting aside metaphysical questions of origin it is inevitable that at least some elements of spirituality derive from basic needs and motives. At the same time, there are good reasons to expect empirical findings of separate spiritual factors. This may occur because individuals who claim some form of religious or spiritual identity, experience such beliefs and experiences as another level of their being or psyche. Secondly, the human motive systems that underlie hope also fuel spiritual development. Measures such as the AHS or the VAF-hope derive primarily from the mastery system. In the West, religious and spiritual systems primarily support the attachment and survival systems (Scioli & Biller, 2009).

In regards to *liberation/trust*, we can make a similar point about motive systems. This factor is ostensibly a composite of survival and attachment. Again, it is not surprising that this component should demonstrate little overlap with the two mastery-oriented measures of hope. As we have already noted, the trust construct is central in philosophical accounts of hope. Recall that in Erikson's (1950) seminal work on

the lifespan, the first presumed challenge is to cultivate more trust than mistrust. If successful, the infant emerges with a basic capacity for hope. This Eriksonian hope does not suggest a propensity towards goal attainment but instead a core belief that one lives in a predictable, benign, caring universe.

Overall, the patterns of convergence and divergence force us to revisit the question of meaning. What is hope? Why are there varying definitions? Are goal-attainment models sufficient for a science of hope? Students of archaeology may recall that a classic representation of hope is a statue of a woman looking skyward to the heavens (spirituality), holding broken chains in one hand (survival/liberation), and grasping an anchor in the other hand (attachment). Perhaps we should view hope as the ultimate cultural projection, a tool indispensable to forward-looking humans who require a future that is benign and open with possibilities. However, unlike optimism, which can be "blind," or "unfounded," and requires high levels of positive outcome probabilities, hope relies on the trust that things will eventually work out. This soberer and open-ended countenance lends greater flexibility in reality negotiation, including endless iterations of self-in-the world. If this is the case, time and place will dictate whether the projection will be mastery, attachment, or survival-oriented, or alternatively, spiritually loaded. The larger question is whether psychology can rise above these shifting tides for a clearer, more integrative, perspective on hope.

Hope across Cultures

We could not confirm the original four-factor solution of attachment, survival, mastery, and spirituality. The spirituality factor was preserved and we discuss this dimension of hope in the next section. Taking a broader perspective, the arrangement of the nonspiritual items still reflects the components of attachment (support/empowerment), survival (liberation/trust), and mastery (personal mastery). However, the composites differ in motive content. In the U.S. version, "attachment" consists of connectedness and emotional support items. In the Italian version, support/empowerment also includes goal support (supported strivings items). To some extent, this may reflect cultural differences in beliefs about social mobility and the loci of power (i. e., meritocracy vs. mobility via family and social networks). In a comparison of the EU partners, D'Agostino and Regoli (2013) found that opportunities for young adults in Italy and Spain, more so than in the other countries, were "largely affected" by family socioeconomic status (SES).

At the same time, goal progress (ultimate gains items) correlated with supported strivings in the U.S. sample but merged with fear reduction (self-regulation) in the Italian sample, composing the second factor, support/empowerment. Two forms of Italian empowerment emerge, one based on social support, and one that is individualized, and based on a self-regulated (personal) process. Without further research, we cannot know if the Italian rendition of personal empowerment means that less anxiety results from perceived goal progress or whether stronger self-regulation skills facilitate the perception of goal attainment. Given Italy's slow recovery from the recent economic crisis (De Vogli, Vieno, & Lenzi, 2013), and higher unemployment relative to other EU countries, some might favor the former hypothesis (progress reduces anxiety). However, there is also research to support the second hypothesis. Individuals who can scale back or scale forward their goals, and cope with both positive and negative elements of reality are less likely to maintain perceptions of unachievable outcomes (Folkman, 2010; Lazarus, 2003).

The third derived factor is comparable to the U.S. survival component (liberation and trust) except that fear reduction (self-regulation) is not included. This suggests a socialized form of coping that lends a sense of liberation. Again, without further studies, several interpretations are possible. We already noted the perceived launching power of Italian family and community contacts. From another perspective,

Drouhot (2017) invokes the concept of "community liberation" to describe how some Italians, with trust cast beyond the clan, seek greater degrees of freedom in "far-flung support-providing others" (e.g., online groups, distant clubs, etc.). A third explanation is that higher levels of interpersonal trust may spawn greater faith in larger economic and political systems to operate as vehicles for positive change (see Schyns & Koop, 2010).

Hope and Spirituality

We drew on an existing U.S. sample of comparable age for a direct comparison of CHS–S non-spiritual and spiritual scale scores, as this general item-factor breakdown is consistent across the two cultures. We did separate analyses for males and females. The greatest difference was in the realm of spirituality, with U.S. participants reporting higher scores. A secondary analysis of the *spirituality* subscales revealed significantly higher U.S. scores for all three components, presence, assurance, and empowerment. The greatest difference was in spiritual presence (Cohen's d = .72 for males, and .75 for females). However, the differences in spiritual assurance and spiritual empowerment were also robust (average Cohen's d across genders = .38 for assurance, .41 for empowerment). We also did a comparison across four identical age levels (18-20, 21-26, 27-40, and 41-77 years), and found the significantly higher scores in the U.S. sample at every age (all ps < .01, post Bonferroni). Within cultures, we found a similar pattern. The two youngest groups were not significantly different. Individuals in Groups 3 (27-40 years) and 4, (41-77 years) reported higher levels of spirituality than Groups 1 (18-20 years) or 2 (21-26 years). Group 4 (41-77 years) reported higher spirituality than Group 3 (27-40 years) — we used combined gender samples because the proportions of males and females were comparable across cultures. It is difficult to be certain of the meaning of these differences in levels of spirituality. We need further research to explore how deeply spiritual questions translate across cultures. In Italy, approximately 80% of the population identifies as Catholic but only about 20% regularly attend church. For Giordan (2010), this affirms that Catholicism continues to affect cultural and ethnic identity. However, many Italians, particularly adolescents and young adults, are increasingly drifting away from much of the dogma in favor of a more pragmatic "common sense" Catholicism. Palmisano (2010) also notes a developing Italian pluralism in the realm of spirituality. In her sample, she found three subtypes of spiritual leanings: "ethical," "religious," and "inner self (directed)." However, only 8% identified as "spiritual but not religious." In the United States, surveys indicate a larger percentage of individuals put themselves in this category (20-40%). Because many of the spiritual items in the CHS–S imply metaphysical forces, the fact that belief in extratheological sources of spirituality is less common in Italian culture, could explain the lower scores.

Limitations and Future Directions

We note several limitations of the present study. We relied on a convenience sample, perhaps different from the sample used for the validation of the original scale (beyond cultural differences). We did not collect demographic data such as SES or region (e.g., north vs. south). We did not include repeated administrations that could inform temporal stability or predictive validity. These are important gaps to be addressed in future investigations. Going forward, this multidimensional measure of hope needs to be extended to the still developing subfields of Italian health psychology, behavioral medicine, and aging studies.

Conclusions

The present study adds to the cross-cultural literature on hope, by presenting a reliable and valid instrument, applicable in Italian culture, that is inclusive of the attachment, survival, and spiritual dimensions often neglected in more goal-oriented accounts. The Italian validation of CHS–S fills an important gap, providing a psychometrically sound tool for assessing hope in a multidimensional and cross-cultural applicable manner. Hope is a unique coping resource; hope draws from both negative and positive elements of reality, may bring an enlarged perspective, encompassing both reality construction and reality surveillance (Folkman 2010). Hope is not the same as self-efficacy or optimism. Hope is not "self-reliant" or control-dependent and thus more sustainable across a lifespan that will invariable bring loss, illness, and an encroaching sense of mortality (Bruininks & Malle, 2005). Beyond the natural vicissitudes of life, we indubitably live with increasing levels of uncertainty and danger that demand unwavering hope. In the laboratory, hope frequently emerges as a robust predictor of both general well-being (Ciarrochi & Deneke, 2006; Magaletta & Oliver, 1999) and life satisfaction (Santilli, Marcionetti, Rochat, Rossier, & Nota, 2017). Moreover, there is much anecdotal evidence, and increasing empirical support, indicating that hope may be the missing emotional link in mind-body healing (Scioli et al., 1997; Scioli et al., 2016). In conclusion, to endure and even thrive in the context of humanity's multilevel challenges, from diseases within the body to disturbances imposed by time and place, we must continue to cultivate hope, courage, resilience, and perseverance (see also Magnano, Paolillo, Platania, & Santisi, 2017; Ginevra et al., 2018).

Note

1. The Italian version of the CHS-S is avaliable upon request from authors (paola.magnano@unikore.it).

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